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Section B - Supplies or Services and Prices

ITEM NO 0003	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT (b) (4)				
	Engineering and Technical Services CPFF								
	FOB: Destination								
			ESTIM	IATED COST FIXED FEE					
			TOTAL EST	COST + FEE	(b) (4)				
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT				
0003AA	Holding SLIN for CLIN 0	1	Lot	UNII FRICE	(b) (4)				
	CPFF								
	be reduced with every add	This priced SLIN is a holding SLIN for administrative purposes. This SLIN will be reduced with every additional incremental funding modification. The remaining ceiling is (b) (4) FOB: Destination							
			ESTIM	IATED COST FIXED FEE					
			TOTAL EST	COST + FEE	(b) (4)				
ITEM NO 0003AB	SUPPLIES/SERVICES	QUANTITY 1	UNIT Lot	UNIT PRICE	AMOUNT				
0003Ab	Funding for CLIN 0003	1	Lot		(b) (4)				
	CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300615946								
			ESTIM	IATED COST FIXED FEE					
	ACRN AA CIN: 130061594600001		TOTAL EST	COST + FEE	(b) (4)				

(b) (4)

AMOUNT ITEM NO SUPPLIES/SERVICES QUANTITY UNIT **UNIT PRICE** (b) (4) 0004

Support Costs

COST

FOB: Destination

ESTIMATED COST

ITEM NO SUPPLIES/SERVICES QUANTITY UNIT **UNIT PRICE AMOUNT** (b) (4)

0004AA 1 Lot

> Holding SLIN for CLIN 0004 **COST**

This priced SLIN is a holding SLIN for administrative purposes. This SLIN will be reduced with every additional incremental funding modification. The

1

remaining ceiling is (b) (4)

FOB: Destination

ESTIMATED COST (b) (4)

OUANTITY ITEM NO SUPPLIES/SERVICES UNIT UNIT PRICE **AMOUNT** Lot

Funding for CLIN 0004

COST

0004AB

FOB: Destination

PURCHASE REQUEST NUMBER: 1300615946

(b) (4) ESTIMATED COST

ACRN AA

CIN: 130061594600002

N65540-15-D-0009 0008 Page 4 of 14

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005					NSP

Technical Data CDRLs -NSP FOB: Destination FFP

NET AMT	(b)

LOE & FUNDING

LABOR CATEGORY	Epsilon
	ST/OT
Logistician	(b) (4)
QA Technician	
Clerk/Typist	
Senior Engineering Tech	
Shipfitter/Welder/Burner	
Pipefitter/Brazier	
Maint Trade Helper	
Senior Engineer	
Engineering Tech	
HVAC Tech	
Marine Equip Mechanic	
Marine Electrician	
Planner Estimator	
Program Manager	
Site Foreman	
Total Hours	5,068/906

(b) (4)

Labor Cost: Fixed Fee: Total Labor: Support Cost:

TOTAL CPFF \$ 542,321.37

This order has hereby been awarded in the amount of \$542,321.37 and incremental funding in the amount of (b) (4) . As a result, the total amount of funding obligated and available for payment under this order is (b) (4) . It is estimated that the funding under this order will cover the cost of performance through 01 August 2017. In accordance with contract clause 52.232-22, Limitation of Funds, the Government is not obligated to reimburse the contractor for any costs incurred in excess of(b) (4) . unless additional funds are made available and obligated under this order in a subsequent modification. The total unfunded balance remaining is (b) (4) . based on the total delivery order value.

STATEMENT OF WORK

STATEMENT OF WORK

1 SCOPE

1.1 Provide materials, tooling and personnel to accomplish HFC-236fa Ship Alteration on R-114 Air Conditioning Plants on (b) (2) (DDG-(b) (2 AC Plants). In support of 236FA conversion, provide POA&M to track program installations milestones for each ALT. These alterations replace existing CFC type refrigerant with approved HFC alternatives and modifies the plants for proper cooling operation. The modifications are necessary due to the production phase out of CFC Refrigerants in accordance with the 1990 Amendments of the US Clean Air Act and the Presidential Announcement of 11 February 1992.

2 APPLICABLE DOCUMENTS / REFERENCES

- 2.1 Ship Alteration Record DDG(b) (2)
- **2.2** NAVSEA S9AAO-AB-GOS-010, "General Specifications for Overhaul (GSO) of Surface Ships"
- **2.3** NAVSEA SL720-AA-MAN-010/FMP, "Fleet Modernization Program (FMP) Management and Operations Manual"
- 2.4 Mil-STD-2003, Military Standard for electrical Wiring
- 2.5 NAVSEA S6430-AE-TED-010, Flexible Hose Assemblies
- **2.6** NAVSEA DRWG. 810-1385506, Hose Schedule for Shipboard Services
- **2.7** MIL-STD-777E SH.
- **2.8** MIL-R-16743
- **2.9** NAVSEA S9073-A2-HBK-010
- **2.10** HFC-236fa Installation Instructions
- 2.11 NAVSSES Instruction 4720-2G
- 2.12 MIL-STD-1689, Fabrication, Welding and Inspection; Structural
- **2.13** MIL-STD-2035, Non Destructive Test Acceptance Criteria

- **2.14** STD 810-4714432, Hangers, Fabrication Details and Installation
- 2.15 NAVSEA 0967-LP-000-0110, Electrical Installation and Maintenance Book
- **2.16** MIL-STD-1627, Bending of Pipe or Tubing for Ship Piping Systems
- **2.17** NAVSEA 9090-310F
- 2.18 NAVSEA Standard Items
- **2.19** Ship Installation Drawings

3 <u>TECHNICAL REQUIREMENTS</u>

- **3.1** The contractor will ensure that all shipboard industrial work is accomplished IAW NSTS 9090.310F and NSWCPDINST 4720.2G for quality control. QA workbooks shall be created for each new alteration and provided to the appropriate On-Site Installation Coordinator (OSIC) no less than 14 days before the start of the alteration.
- **3.2** In accordance with the Naval Surface Warfare Center Philadelphia Division (NSWCPD) schedule and as coordinated by the OSIC, conduct a system/equipment pre-install checkout (PICO) to determine the condition of, and requirements for, overhaul or replacement of items affected by the modification in accordance with NSWCPD test procedures. Determine requirements for removal of interferences and establish removal and access routes for the equipment to be removed and installed. Additionally, identify new support equipment locations for the modification of new electrical enclosures, piping runs, and mounting brackets. Provide a report with results of PICO to NSWCPD utilizing government provided data sheets.
- **3.3** Based on the PICO, identify repair tasks that may be required to support the successful operational test of the Air conditioning Plants. Submit an "as found" condition report (CR) to the NSWCPD Contracting Officer via the OSIC. The CR will identify the as found conditions and estimated cost to repair in order to execute SHIPALT 151.02K.
- **3.4** Provide a copy of the PICO report and a Condition Report of recommended repairs within five (5) working days of survey completion to the Subject Matter Expert (SME).

4 REQUIREMENTS

- **4.1** In accordance with the NSWCPD schedule and as coordinated by the On-Site Installation Coordinator (OSIC), provide engineering services, manpower, material support, and required technical supervisory and field service support to modify designated shipboard Air Conditioning Plants utilizing references 2.1 thru 2.19, government and contractor furnished material, and the following paragraphs as guidance.
- **4.2** In accomplishing this work, the contractor shall:

- 4.2.1 Ensure compliance with all safety regulations, including obeying and providing for the local personal protection equipment (PPE) requirements (hardhats with chin straps, steel toed safety shoes, safety eye wear, and hearing protection) per local requirements.
- 4.2.2 Conform to shipboard routine with regard to cleanliness, personnel conduct, and the ship's security and integrity.
- **4.3** Teams will be required in San Diego, CA.
- **4.4** Team members in the Site Foreman labor category shall have experience, which includes installation and repair of shipboard refrigeration/air conditioning plants.
- **4.5** Team members tasked to perform conversion, repair and alterations on installed/existing Air Conditioning equipment that could be expected to release Class 1 (CFC) refrigerants into the atmosphere shall obtain EPA approved Universal technician certification in accordance with Section 608 of the U.S. Clean Air Act, 1990, as amended.
- **4.6** In accordance with the NSWCPD schedule and as coordinated by the NSWCPD Field Representative, provide storage containers at each pier side site for staging of materials to support the HFC-236fa installation programs.
- **4.7** The contractor shall provide special materials and inspection services for the use as required to support the installation.
- **4.8** The contractor shall have a Quality System that complies with paragraph 4.3.1 of the contract. Additionally the contractor shall have a Quality Assurance (QA) Workbook that has been reviewed by NSWCPD.
- **4.9** The contractor must provide their Personnel's QA Certifications and QA records with respect to material prefabricated off-site requirements.
- **4.10** Technical guidance for all work accomplished under this delivery order shall be the local OSIC and the Subject Matter Expert (SME).
- **4.11** The contractor shall in all cases defer to the local OSIC regarding any installation information and interface with ships force.
- **4.12** The contractor shall provide a detailed estimate to complete work within 24 hours of submitting a Condition Report.
- **4.12** In accordance with the NSWCPD schedule and as coordinated by the NSWC Field Representative, install HFC-236fa Ship Alteration DDG(b) (2) (2 plants) on R-114 Ships Air Conditioning Plants as specified utilizing References 2.1-2.19, government and contractor furnished material, and the following paragraphs as guidance.

- **4.13** Remove the refrigerant of the designated plants.
- **4.14** Remove compressor oil into a suitable container for disposal.
- **4.15** Return recovered refrigerant and oil to the OSIC for disposal or dispose of as directed by the OSIC.
- **4.16** Remove required plant equipment.
- **4.17** Provide services to deliver equipment removed from the ship that is considered scrap to DRMO unless otherwise directed by NSWCPD.
- **4.18** Open and inspect Hot Gas By-Pass Valve, report findings to OSIC and NSWCPD Code 214 Project Manager.
- **4.19** Inspect Condenser Shells, only in the presence of a York (JCI) Factory Representative.
- **4.20** Provide services to recover and clean R-11 hydrostatic test refrigerant bringing it back to ARI -700 standards. All R-11 supplied by NSWCPD will then be returned to NSWCPD after being cleaned to ARI-700 standards.
- **4.21** Install/Modify foundations, electrical panels and piping as required to suite the installation. Accomplish modifications to the lube oil system as specified by Reference 3.10.
- **4.22** Accomplish specific unique repairs authorized by NSWCPD required to support post conversion operation and testing. Included in these repairs may be the modification of installed and operational Halocarbon Monitors to permit detection of HFC-236fa.
- **4.23** Requirements listed in NAVSEA Standard Item 009-24 must be followed when removing any piping or piping components.
- **4.24** Refrigerant escape to atmosphere (REA) piping downstream of the relief valve shall be welded 90-10 coppernickel. Brazed joints and mechanically attached fittings are prohibited.
- **4.25** Make necessary modifications to existing plant as specified SHIPALT 236fa Installation Procedures.
- **4.26** Install government provided conversion material, refrigerant and POE oil.
- **4.27** All new or disturbed piping is to be pressure tested and proven to be free of obstructions prior to flushing the affected systems.
- **4.28** Leak test and flush piping systems in accordance with JCI /NSWCPD HFC-236fa procedure (Reference 2.10).

4.29 With a JCI/York Factory Representative on-site, observe and assist with the required pre and post hydrostatic shell inspections, air condition compressor disassembly and reassembly and operational testing of the modified plants in accordance with applicable technical manuals, existing test procedures, and test specifications.

NOTE: The Contractor is responsible for funding and scheduling this requirement with the local JCI/York field service office.

4.30 Brief the crew in the operation of the modified plants.

5.0 DELIVERABLES:

- **5.1** Provide a detailed Installation Plan of Action & Milestones (POA&M) Schedule. The initial POA&M will be submitted within ten (10) working days after award of this delivery order. The POA&M will be updated bi-weekly. (CDRL A003)
- 5.2 Provide a QA workbook as detailed in Par 1.13 including all personnel qualifications and certifications for those that will be onboard the install. This QA workbook is to be submitted to NSWCPD one month prior to the start of each installation. Upon completion of the installation the contractor shall provide the Program Manager a copy of the QA workbook and completed IPCPs. (CDRL A004)
- 5.3 Prior to the start of the installation, contractor shall review and sign the Industrial/Alteration Pre-Start Checklist (see Enclosure (6) of NSWCPD Instr. 4720.2G "Process and Policy for Shipboard Industrial Work") for each installation. (CDRL A013)
- 5.4 Upon completion of the installation, provide two (2) hard copies and one electronic copy of red-lined marked drawings reflecting final configuration to NSWCPD within (2) weeks of the installation completion date. (CDRL A014)

6 SCHEDULE

6.1 The installation shall take place during (b) (2) FY17 Selected Restricted Availability (SRA) period starting February 6 2017- July 21 2017.

7 GOVERNMENT FURNISHED MATERIAL/INFORMATION (GFM/I)

- **7.1** SHIPALT HFC-236fa Installation Kits (GFM)
- **7.2** SHIPALT 236fa Installation Procedures (GFI)
- **7.3** 236fa Ship Check Forms (GFI)
- 7.4 Alteration Installation Drawings, SID's (GFI)

8 GOVERNMENT SUPPLIED SUPPORT SERVICES

- **8.1** Temporary services to include: Lighting, Ventilation, Electrical Power 110 & 440, Compressed Air minimum of 100 PSI.
- **8.2** Service support to include: Crane, Rigging, Painting & Lagging.
- 9 TRAVEL
- **9.1** Not Authorized.
- 10 **OVERTIME**
- **10.1** Overtime will be required to support emergent ship schedules and shortened pier side availabilities. Overtime will also minimize the down time of Combat Systems equipment and allow completion to support the ship's operation schedule.

11 CONTRACTOR PERSONNEL IDENITIFICATION

11.1 In the performance of this contract, contractor employees shall identify themselves as contractor personnel by introducing themselves or being introduced as contractor personnel and by displaying distinguishing badges or other visible identification for meetings with government personnel. Contractor personnel shall appropriately identify themselves as contractor employees in telephone conversations and formal and informal written correspondence.

- 12 CLASSIFIED MATERIAL/INFORMATION:
- 12.1 No access to classified material/information will be required for this Delivery Order.
- 13 PERIOD OF PERFORMANCE: Date of Award through 01 August 2017
- 14 CONTRACTING OFFICER'S REPRESENTATIVES (COR)
- 14.1 The COR for this contract is (b) (6) Code (b), Phone: (b) (6)
- 15 SUBJECT MATTER EXPERT (SME)
- 15.1 The SME for this delivery order is (b) (6) Code (b) Phone: (b) (6)
- 16 FINANCIAL POINT OF CONTACT: (b) (6) Code(b) (6)
- (b) (6)

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0003	Destination	Government	Destination	Government
0003AA	Destination	Government	Destination	Government
0003AB	Destination	Government	Destination	Government
0004	Destination	Government	Destination	Government
0004AA	Destination	Government	Destination	Government
0004AB	Destination	Government	Destination	Government
0005	N/A	N/A	N/A	Government

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	DODAAC
0003	N/A	N/A	N/A	N/A
0003AA	POP 10-JAN-2017 TO 01-AUG-2017	N/A	NAVAL SURFACE WARFARE CENTER PHILA (b) (6) NSWC PHILADELPHIA DIVISION NSLC DETACHMENT 1601 LANGLEY AVE, (b) (6) PHILADELPHIA PA 19112-5051 (b) (6) FOB: Destination	N64498
0003AB	POP 10-JAN-2017 TO 01-AUG-2017	N/A	(SAME AS PREVIOUS LOCATION) FOB: Destination	N64498
0004	N/A	N/A	N/A	N/A
	N/A POP 10-JAN-2017 TO 01-AUG-2017	N/A N/A	N/A NAVAL SURFACE WARFARE CENTER PHILA (b) (6) NSWC PHILADELPHIA DIVISION NSLC DETACHMENT 1601 LANGLEY AVE, (b) (6) PHILADELPHIA PA 19112-5051 (b) (6) FOB: Destination	N/A N64498
0004AA	POP 10-JAN-2017 TO	- ,,	NAVAL SURFACE WARFARE CENTER PHILA (b) (6) NSWC PHILADELPHIA DIVISION NSLC DETACHMENT 1601 LANGLEY AVE, (b) (6) PHILADELPHIA PA 19112-5051 (b) (6)	- "

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 1771810 81HF 310 VU021 0 050120 2D 000000

COST CODE: A00003772247

AMOUNT: (b) (4) CIN 130061594600001: (b) (4)

CIN 130061594600002:

Section J - List of Documents, Exhibits and Other Attachments

<u>CDRLS</u>

The following CDRLs will be uploaded into EDA:

- 1) A003 POA&M
- 2) A004 Quality Assurance Workbook
- 3) A007 Production Status Report
- 4) A013 Site Survey Report (PICO)